JIAN CHEN

Computer Science and Electrical Engineering
University of Maryland Baltimore County
Baltimore, MD 21250
http://www.csee.umbc.edu/~jichen

Phone: 540 818-3618
Fax: 410.455.3969
Email: jichen@umbc.edu
http://www.csee.umbc.edu/~jichen/ivcl (lab)

APPOINTMENTS

- **University of Maryland, Baltimore County**, Assistant Professor (tenure-track) of CSEE, 2012-
- **University of Southern Mississippi**, Assistant Professor (tenure-track) of CS, 2009 −2012
- **Brown University**, Research Associate in Computer Science and Biology, 2006 - 2009
- **Virginia Tech**, Research Assistant in Computer Science, 2002 – 2006
- **University of Houston**, Research Assistant of Computer Science, VERI, 1999-2002
- Great Dragon Telecomm Co., Beijing, China, Senior Engineer, 1999
- Tianjin Telecomm Co., Tianjin, China, Engineer, 1993-1996

EDUCATION

- **Ph.D., Computer Science,** Virginia Polytechnic Institute and State University, 2006
  Thesis Title: "Design and Evaluation of Domain-Specific Interaction Techniques in the AEC Domain for Immersive Virtual Environments"
  Thesis Advisor: Doug A. Bowman, Virginia Tech
- **M.S., Computer Science,** University of Houston, 2002
  Thesis Title: "A Virtual Environment System for the Comparative Study of DOME and HMD"
  Thesis Advisors: R. Bowen Loftin, and Ernst L. Leiss
- **M.S., Mechanical Engineering,** Tsinghua University and Tianjin University (joint program), 1999
  Thesis Title: "A Method for Synthesizing Images Captured from Multiple viewpoints"
  Thesis Advisors: Dr. Lu, Da and Dr. Sun, Lanfeng

RESEARCH INTERESTS

- Information and scientific visualizations
- 3D user interfaces and interaction techniques
- Application domains: biology (animal flights and bioinformatics), biomedicine, physiology, AEC (architecture, engineering, construction), space program, security, visual analytics, etc.

Research

RESEARCH GRANTS

- **Co-PI: NSF: Collaborative Research: ABI Development:** PathBubbles for Dynamic Visualization and Integration of Biological Information, 7/1/2012-6/30/2015, Carl J. Schmidt (PI, Biology, U of Delaware), Cecilia N. Arighi (Biology, U of Delaware), Vijay K. Shanker (Biology, U of Delaware), Fiona M. McCarthy (Basic Sciences, MSU), **Jian Chen**, $394,007 of $1,043,110.
- **PI: NSF IIS (Information and Intelligent Systems)**, Supporting Knowledge Discovery Through a 3D Scientific Visualization Language, 11/1/2010-10/31/2013, **Jian Chen**, David H. Laidlaw (CS, Brown), and Alexander P. Auchus (Neurology, UMMC), $205,001 of $499,573.
- **Sole-PI: NSF EPSCoR seed grant through MSU,** Analysis and Visualization of Time-Varying Data for Optimizing Knowledge Discovery in Biology, 9/1/2010-8/30/2012, **Jian Chen**, $69,138 of $69,138.

- **Sole-PI: NSF EPSCoR seed grant through MSU,** Storytelling Bubbles: Integrating Symbolic Representation, Data Ink Manipulation, and Metaphorical Interface for Fluid Time-Varying Biological Data Analysis, 9/1/2011-8/30/2013, **Jian Chen**, $35,979 of $35,979.
- **Co-PI NSF DBI: RCN-UBE INCUBATOR:** Visual Analytics in Biology Curriculum Network, 4/11/2011-4/10/2012, Raphael D. Isokpehi (Biology, JSU), Susan Bridges (CS, MSU), **Jian Chen**, Hari H. Cohly (Biology, JSU), and Edu B. Suarez-Martinez (Biology, U of Michigan), $0 of $50,000.
- **Co-PI: NSF DUE (Division of Undergraduate Education)**: Integrating Web-Based Visualization with Structural Systems Understanding to Improve the Technical Education of Architects, 8/1/2009-7/31/2012, Mehdi Setareh (Architecture, Virginia Tech), Michael Ermann (BC, USC), Nicholas Polys (CS, Virginia Tech), Brett Jones (Architecture, Virginia Tech), and **Jian Chen**, $0 of $499,833.
- **Sole-PI: USM: Lucas endorsement award for faculty research excellence,** Analysis and Visualization of Time-Varying Data for Optimizing Knowledge Discovery in Biology, **Jian Chen (PI)**, 10/18/2010-6/17/2011, $3,843 of $3,843.

OTHER RESEARCH GRANT ACTIVITIES

- **Helped Dr. Lou Marciani at USM on his DHS Project on Sport Security Training and Evacuation,** May 2010-Dec 2010. ~1.5 month summer salary + one course release + 25% student support.

HONORS AND AWARDS

- **Front cover image** (on **DT-MRI tractography**), PacificVis, 2012
- **Front cover image** (on **bat flight modeling**), EuroVR, 2009
- **Front cover image** (on **domain-specific design**), Presence: Teleoperators and Virtual Environments, Oct 2009 issue, MIT Press.
- **Best poster award** (on **navigation techniques** for geoscience data visualization), ACM I3D, 2009
- Center for Vision Research **fellowship** (on **visualization theory**), Brown University, 2008
- **Best poster candidate** (on **multiple layer visualization**), IEEE Visualization, 2007
- **Back cover image** (on **domain-specific interaction**), Proceedings of IEEE Virtual Reality, 2006
- Graduate R&D **Project Award** (on **pen-based computing**), Virginia Tech, 2004-2005
- **Best paper award** (on **multiple-view information visualization**), Human Factor and Ergonomics Society (HFES) Annual Meeting, 2003
- Authored the only paper **receiving full scores from all four reviewers** (on **information-rich virtual environments**), Young Investigators Forum in Virtual Reality, South Korea, 2003
- Graduate student **fellowship**, University of Houston, 2000-2002
- **Winner of the National Challenge Cup**, 2nd place (for **innovation and excellence in design**, nation-wide competition among college students), P.R. China, 1999
- **Yan, Hong-Hsen scholarship**, Tianjin University, P.R. China, 1999
- **Leadership award**, Tianjin University, P.R. China, 1998
- **Best student award**, Tianjin University, P.R. China, 1996-1997
- **Best thesis proposal award**, Tianjin University, P.R. China, 1997
- Member, **Tan, Hao-qiang publishing group,** featuring publishing textbooks, 1997-1999
- Member, Upsilon Pi Epsilon

PUBLICATIONS: REFEREED JOURNAL ARTICLES

1. **Chen, J.**, Cai, H., Auchus, A.P., and Laidlaw, D.H., Effects of Stereo and Screen Size on the Legibility of Three-dimensional Streamtube Visualizations, *IEEE Transactions on Visualization and Computer Graphics (TVCG, also in IEEE Visualization)*, 2012 (conditionally accepted).
2. Hu, G., Pan, Z., Zhang, M., Chen, D., Yang, W., and **Chen, J.** An interaction toolkit for generating harmonious color schemes, Color Research & Application, 2012.

3. Forsberg, A.S., **Chen, J.**, and Laidlaw, D.H., Comparing 3D vector field visualization methods: a user study, *IEEE Transaction on Visualization and Computer Graphics (TVCG,* also in *IEEE Visualization),* 15(6): 1219-1226, 2009.
4. **Chen, J.** and Bowman, D.A., Domain-specific design of 3D interaction techniques: an approach for designing useful virtual environment applications, *Presence: Teleoperators and Virtual Environments, MIT Press,* 18(5): 370-386, October 2009. (**Front cover**)
5. **Chen, J.**, Riskin, D.K., Breuer, K.S., Swartz, S.M., and Laidlaw, D.H., Bookstein coordinate-based shape analysis of bat wing kinematics, *Integrative and Comparative Biology,* also in *the Society for Integrative and Comparative Biology Annual Meeting,* 2009.
6. Riskin, D.K., Willis, D.J., Iriarte-Díaz, J.H., Tyson, L., Kostandov, M., **Chen, J.**, Laidlaw, D.H., Breuer, K.S., and Swartz, S.M., Quantifying the complexity of bat wing kinematics, *Journal of Theoretical Biology*, 254: 604-615, 2008.
7. Bowman, D.A., **Chen, J.**, Wingrave, C.A., Lucas, J., Ray, A., Polys, N.F., Li, Q., Haciahmetoglu, Y., Kim, J-S, Kim, S-J, Boehringer, R., and Ni, T., New directions in 3D user interfaces, *International Journal of Virtual Reality*, 5(2): 3-14, 2006.
8. Sun, L., Gao, T., Liang, Y., and **Chen, J.**, Study on the method of constructing rational cubic curves and curved surface including controlling parameters, *Transactions of Tianjin University*, 4(1): 29-34, 1998.
9. **Chen, J.**, Sun, L., and Lu, D., A review of virtual reality, *Journal of Tianjin Institute of Textile Science and Technology*, 17(2): 91-96, 1998 (in Chinese).
10. Sun, L., Xu, J., **Chen, J.,** and Zhou, L., A design method of variables for parameterization drafting based on shape features, *Journal of Tianjin Institute of Textile Science and Technology*, 17(2): 32-36, 1998 (in Chinese).

BOOK CHAPTERS

- **Chen, J.**, Haipeng Cai, Laidlaw, D.H., and Alexander P. Auchus, *On the semiology analysis and evaluation of vector and tensor field visualizations*, In Huang, T (eds.), Human-Centric Visualization: Theories, Methodologies, and Case Studies, 2012 (to appear).
- **Chen, J.**, Haipeng Cai, Laidlaw, D.H., and Alexander P. Auchus, *SSVL-T: A simple scientific visualization language for tensor field visualization*, In Huang, T (eds.), Human-Centric Visualization: Theories, Methodologies, and Case Studies, 2012 (to appear).
- Cai, H., **Chen, J.**, Auchus, A.P., Pan, Z., and Laidlaw, D.H., *InShape: In-Situ Shape-Based Interactive Multiple-View Exploration of Diffusion MRI Visualizations*, Lecture Notes in Computer Science (also in International Symposium on Visual Computing), 2012.
- *(Invited)* **Chen, J.**, *A hybrid direct visual editing method for architectural massing study in virtual environments*, In Wang, X. and Tsai, J. (Eds.), Collaborative Design in Virtual Environments*,* Springer, 2010.

REFEREED CONFERENCE PAPERS

1. Penney, D., **Chen, J.** and Laidlaw, D.H., Effects of illumination, texture, and motion on task performance in 3D tensor-field streamtube visualizations, *Pacific Visualization*, 2012.
2. Bacim, F., Polys, N., **Chen, J.**, Setareh, M., Li, J. and Ma, L., Cognitive scaffolding in Web3D learning systems: a case study for form and structure, *Proceedings of ACM Web3D*, Los Angeles, July 2010.
3. **Chen, J.**, Kostandov, M., Pivkin, I., Riskin, D.K., Willis, D., Swartz, S., and Laidlaw, D.H., Virtual analysis of dimensionality reduction in an interactive virtual environment for exploring bat flight kinematics, *Proceedings of the Joint Virtual Reality Conference of EGVE-ICAT-EuroVR*, France, October 2009. **(Front cover)**

4. Ni, T., Bowman, D.A., and **Chen, J.**, Increased display size and resolution improve task performance in information-rich virtual environments, *Proceedings of ACM Graphics Interface (GI)*, 139-146, Quebec City, Canada, June 2006.
5. **Chen, J.** and Bowman, D.A. Evaluation of the effectiveness of cloning techniques for architectural virtual environment, *Proceedings of the IEEE Virtual Reality (VR)*, 103-110, Alexandria, VA, March 2006 [acceptance rate: **29%**].
6. **Chen, J.**, Narayan, M.A., and Perez-Quinones, M.A., The use of hand-held devices for search tasks in virtual environments, *Proceedings of the workshop on new directions in three-dimensional user interfaces (3DUI), IEEE Virtual Reality (VR)*, 15-18, Bonn, Germany, March 2005.
7. **Chen, J.**, Bowman, D.A., Lucas, J.F., and Wingrave, C.A., Interfaces for cloning in immersive virtual environments, *Proceedings of the Eurographics Symposium on Virtual Environments (EuroVR)*, 91-98, Grenoble, France, June 2004.
8. **Chen, J.**, Pyla, P.S., and Bowman, D.A., Testbed evaluation of navigation and text display techniques in an information-rich virtual environment, *Proceedings of IEEE Virtual Reality (VR)*, 181-188, Chicago, IL, March 2004 [acceptance rate: **23%**].
9. Bowman, D.A., North, C., **Chen, J.**, Polys, N.F., Pyla, P.S., and Yilmaz, U., Information-rich virtual environment: theory, tools, and research agenda, *Proceedings of the ACM Virtual Reality Software and Technology (VRST)*, 81-90, Osaka, Japan, October 2003.
10. **Chen, J.**, Effective interaction techniques in information-rich virtual environments, *Proceedings of the Young Investigator's Forum in Virtual Reality (YoungVR)*, Seoul, South Korea, February 2003 (selected as the **best paper and the only paper that got full scores from all 4 reviewers**).
11. Convertino, G., **Chen, J.**, Yost, B.A., Ryu, Y-S, and North, C., Exploring context switching and cognition in dual-view coordinated visualizations, *Proceedings of the International Conference on Coordinated & Multiple Views in Exploratory Visualization (CMV)*, 57-66, London, England, July 2003.
12. Ryu, Y-S, Yost, B.A., Convertino, G., **Chen, J.**, and North, C., Exploring cognitive strategies for integrating multiple-view visualizations, *Proceedings of the Human Factor and Ergonomics Society 47th Annual Meeting (HFES)*, Denver, CO, October 2003 **(Best paper)**.
13. **Chen, J.**, Harm, D.L., Loftin, R.B., Lin, C-Y and Leiss, E.L., A virtual environment system for the comparison of DOME and HMD systems, *Proceedings of the International Conference on Computer Graphics and Spatial Information System (CG&SIS)*, 50-58, Beijing, China, February 2003 (**Best paper candidate**).
14. **Chen, J.**, Fang, Y-C, Loftin, R.B., Leiss, E.L, Lin, C-Y, and Su, S., An immersive virtual environment training system on real-time motion platform, *Proceedings of the Computer Aided Design and Computer Graphic (CAD&CG)*, 951-954, Beijing, China, August 2001.

REFEREED CONFERENCE POSTERS AND SIGGRAPH SKETCHES

1. N. Mohammadi, J-S Kim, X. Chen, J. Chen, and M. Setareh, SMATS: Sketch-based Modeling and Analysis of Truss Systems, Eurographics Symposium on Sketch-based Interfaces and Modeling (SBIM), 2012.
2. J. Chen, H. Cai, and A.P. Auchus, The effects of seeding resolution on DTI streamtube visualization comprehension, Alzheimer's Association International Conference (AAIC), Vancouver, Canada, July 2012.
3. J. Chen, A. Maxwell, H. Cai, and A.P. Auchus, Interactive visual analysis of diffusion-tensor MRI data using the expectation maximization algorithm, American Academy of Neurology Annual Meeting (AAN), 2012.
4. G. Li, A.C. Bragdon, Z. Pan, M. Zhang, S.M. Swartz, D.H. Laidlaw, C. Zhang, H. Liu, and J. Chen, VisBubbles: a workflow-driven framework for scientific data analysis of time-varying biological datasets, ACM SIGGRAPH Asia, 2011.
5. L. Xu, J. Lyle, Y. Wu, Z. Pan, M. Zhang, D.H. Laidlaw, R.L. Hester, and J. Chen, HumMod Explorer: a multi-scale time-varying human modeling navigator, ACM SIGGRAPH Asia, 2011.

6. A.P. Auchus, J. Huang, J. Chen, H. Cai, R.P. Friedland, M.Z. Koubeissi, D.H. Laidlaw, Diffusion Tensor MRI Tractography (DTT) identifies altered brain stem fiber connections accompanying agenesis of the corpus callosum (ACC). Poster accepted for the 20th World Congress of Neurology, November 12-17, 2011.
7. H. Cai, J. Chen, A.P. Auchus, S. Correia, and D.H. Laidlaw, InBox: in-situ multiple-selection and multiple-view exploration of diffusion tensor MRI visualization, IEEE BioVis Conference, 2011.
8. H. Cai, J. Chen, A.P. Auchus, J. Huang, and D.H. Laidlaw, Measuring seeding resolution dependence of diffusion tensor streamtube visualization, IEEE Visualization, 2011.
9. J. Huang, J. Chen, H. Cai, Robert P. Friedland, Mohamad Z. Koubeissi, David H. Laidlaw, and Alexander P. Auchus, Diffusion tensor MRI tractography (DTT) reveals altered brainstem fiber connections accompanying agenesis of the corpus callosum (ACC), American Neurological Association's (ANA) 136th Annual Meeting (oral presentation), San Diego, CA, 2011.
10. H. Liu, A. Bragdon, A. Bergou, and J. Chen, Programming by sketch for scientific computing, *ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games*, February 2011.
11. J. Chen, D. Riskin, T.Y. Hubel, D. Willis,A. Song, H. Liu, K. Breuer, S. Swartz, and D.H. Laidlaw, Exploration of bat wing morphology through a strip method and visualization, ACM SIGGRAPH (talk), Los Angels, July 2010.
12. J. Chen, D.A. Bowman, and D.H. Laidlaw, A hybrid direct visual editing method for architectural massing study in a virtual environment, *IEEE Symposium on 3D User Interfaces*, Lafayette, LA, March 2009.
13. A.S. Forsberg, J.N. Huffman, J. LaViola, J. Dickson, C. Fassett, J. Head, R. Zeleznik, and J. Chen, Work in progress: a head-to-head comparison of navigation techniques for exploring 3D geoscience data sets, *ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games*, Boston, MA, February 2009 (Best poster award).
14. A.S. Forsberg, J. Chen, and D.H. Laidlaw, Towards comparing 3D flow visualization methods, a user study, *IEEE Visualization*, Columbus, OH, October 2008.
15. M. Kostandov, J. Chen, I. Pivkin, S.M. Swartz, and D.H. Laidlaw, Exploring dimensionality reduction of animal flight kinematics in an interactive virtual reality setting, *ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D)*, Redwood City, CA, February 2008.
16. D. Acevedo, J. Chen, and D.H. Laidlaw, Modeling perceptual dominance among visual cues in multilayered icon-based scientific visualizations. *IEEE Visualization*, Sacramento, CA, October 2007 (Best poster candidate).
17. J. Chen, A.S. Forsberg, S.M. Swartz, and D.H. Laidlaw, Interactive multiple scale small multiples, *IEEE Visualization*, Sacramento, CA, October 2007.
18. J. Chen, J., A.S. Forsberg, M. Kostandov, D. Willis, and D.H. Laidlaw, The effect of using large, high-resolution stereoscopic displays for flow visualization, *ACM SIGGRAPH*, San Diego, CA, August 2007 [acceptance rate: 37%].
19. J.F. Lucas, D.A. Bowman, J. Chen, and C.A. Wingrave, Design and evaluation of 3D multiple object selection techniques, *Proceedings of the ACM Interactive 3D graphics (I3D)*, Washington, D.C., February 2005.
20. C-Y Lin, D.T. Chen, R.B. Loftin, J. Chen, and E.L. Leiss, Interacting with visible human data using an ImmersaDesk, *Proceedings of IEEE Virtual Reality (VR)*, 267-268, Orlando, FL, March 2002.

ADDITIONAL SCHOLARLY OUTPUT

Invited talks:

1. *Understanding the science of scientific visualization*, Seven Universities in China, Dec 3 – Dec 30, 2011 (Zhejiang University, Hangzhou Normal University, Shangdong University, Jinan University, Nankai University, Tianjin University, Huadong Science and Technology University)
2. *VisBubbles: a workflow-driven framework for scientific computing*, NSF MS EPSCoR meeting, University of Mississippi, Oxford, MS, September 2011.

3. *The six blind-men's approach to interactive visual computing for sciences and engineering*, Joint DoD / DHS Workshop on Image Analysis. Alcorn State University, January 21, 2011.
4. *Visual and interactive data modeling for science, engineering, and training*, Rutgers University, DIMACS, October 20, 2010.
5. *Beyond DaVinci: interactive visualization for sciences*, NSF ESPCoR meeting, University of Mississippi, September 20, 2010.
6. *Interactive visualization for science, engineering, and training*, **Six Universities** in China, May 21-June 8, 2010 (Peking University, Zhejiang University, Nankai University, Tianjin University, etc.).
7. *Understanding bat wing morphology through modeling and visual data mining*, University of Southern Mississippi, March 8, 2010.
8. *VisBubbles: rethinking the visual interface design*, Mississippi State University, February 17, 2010.
9. *Quantifying the complexity of bat wing kinematics using proper orthogonal decomposition*, Mitsubishi Electric Research Laboratories (MERL), Boston, February 2009.
10. *Domain-specific design of interaction techniques in Architecture, Engineering, and Construction*, Brown University, October 2006.
11. *Domain-specific design of interaction techniques in Architecture, Engineering, and Construction*, General Motors R&D, September 2006.
12. *Designing 3D interaction techniques: research challenges in 3D user interface design*, Dynamic Graphics Lab (DGP) and Ergonomics in Teleportation and Control Laboratory (ETC), University of Toronto, February 2005.
13. *Designing domain-specific cloning techniques*, ACM SIGGRAPH 2004, 3DUI, Birds of a Feather, 2004.
14. *Effective interaction techniques in information-rich virtual environments*, Young Investigator's Forum in Virtual Reality, South Korea, February 2003.

Panels:

1. Inselberg, Alfred, Brady, Rachael, Coming, Daniel, Monroe, Laura, and **Chen, Jian**, Visualization and simulation on immersive display devices, *International Symposium on Visual Computing (ISVC)*, Las Vegas, NV, December 2008.
2. Lindeman, Robert, Zachmann, Gabriel, Blom, Kristopher, **Chen, Jian**, de Haan, Gerwin, and Raji, Andrew, Building the future of – and a career in – VR, *IEEE Virtual Reality (VR)*, Reno, NV, March 2008.
3. Laidlaw, David H., Interrante, Victoria, Ribarsky, William, and **Chen, Jian** (**moderator/organizer**), Getting human-centered computing and scientific visualization married: the myth and critical issues, *IEEE Visualization*, Sacramento, CA, October 2007.

Refereed Demonstrations:

1. Chen, J., Cai, H., and Auchus, A.P. "InBox: In-situ Multiple-Selection and Multiple-View Exploration of Diffusion Tensor MRI Visualization," IEEE Visualization Health Care, 2011.
2. Bowman, D., Gracanin, D, Wingrave, C., Chen, J., Polys, N., Ni, T., Kopper, R., and Kim, J., 3D Interaction Group Research, Lab exhibit at IEEE Virtual Reality 2006.

Training Certificates:

1. Diffusion-weighted magnetic resonance imaging (DTI): principles and applications, Summer School in Biomedical Engineering, Schoenburg, Germany, August 2007.
2. Parallel and grid computing: principles and applications, Argonne National Lab and University of Chicago, Chicago, IL, January 2002.

PATENT

- **Chen, Jian**, Pipeline quick joints, No.ZL98250034.3, Patent Office, P.R. China, 1998.

Teaching

STUDENT ACHIEVEMENT

- Joseph Kitchen, best undergraduate research award (in the theory methods category) on Kinnect-based DT-MRI Interaction, USM, 2011-2012.
- Joseph Kitchen, NASA fellowship, for best undergraduate research, 2012-2013.
- Timothy Bonnette, undergraduate fellowship on his overall research credential, 2010-2011.
- Haipeng Cai, best graduate student research award on Multiview Visualization of DT-MRI data, CoSE and School of Computing, USM, 2011-2012.
- Haipeng Cai, best graduate student research award on Comparative Visualizations of DT-MRI data, CoSE and School of Computing, USM, 2010-2011.
- Hanyu Liu, best graduate student research award on Visual Analysis Interface Design, CoSE and School of Computing, USM, 2009-2010.

COURSES

- **Graduate Courses (USM)**
  COS 701: Visualization toolkit (fall 2011); CSC 625: Computer graphics (spring 2010, together with CSC 425); CSC 698: Interactive visualization (fall 2009)
- **Undergraduate Courses (USM)**
  CSS 211: Introduction to statistics (spring 2011); CSS 333: Programming in C (spring 2011, Fall 2011); CSC 414: Software design (fall 2010); CSC 414L: Software design lab (fall 2010); CSC 425: Introduction to computer graphics (spring 2010); CSC 695: Game design (joint course with the art department, spring 2010)
- **Guest Lecturer:**
  Course: Virtual reality design for science, Brown University/RISD, fall 2008; Course: COS 701: visualization toolkit, USM, fall 2009
- **TA:**
  Course: Computer graphics, Virginia Tech, fall 2002 - spring 2003

STUDENTS

- **Master / Doctorial Thesis Advisee**

1. Wei Wu (PhD student, 2012-)
2. Guohao Zhang (PhD student, 2012-)
3. Hanyu Liu (Master 2011, CS, USM)
4. Haipeng Cai (Master 2012, CS, USM)

- **Undergraduate Students**

1. Joseph A. Kitchin, USM **Honors College**, Computer Science, Class of 2012
2. Timothy Bonnette, USM **Honors College**, Computer Science, Class of 2014
3. Corey Berry (2010, CS USM, worked on DHS project with me)

- **Visiting Scholars:**

1. Yubao Wu (USM, 2011-2012)

- **Thesis Committee**

1. Jadrian Miles, CS, Brown University, MS, fall 2007
2. Shawn O'Keeffe, CS, USM, PhD, expected 2012
3. James Ross, CS, USM, PhD, expected 2012

- **Independent Studies:**

1. Jeffrey Vamado, Psychology, USM, Undergrad with Dr. Alen Hajnal, fall 2010
2. Devon Penney, Computer Science, Brown University, 2008

3. Mykhaylo Kostandov, Computer Science, Brown University, M.S., fall 2007

- **Summer Interns:**

1. Latasa Anderson, Virginia Tech, Minority Academic Opportunities Program (MAOP), summer 2003

Service

PROFESSIONAL SERVICE

- NSF Proposal & Panel reviewer (2008, 2010-2012)
- Program committee: IEEE Virtual Reality (2009-2012), International Symposium on Visual Computing (2007-2010), SIGGRAPH Web3D (2007-2010), ACM Multimedia (2008)
- Conference committee: ACM SIGGRAPH VRCAI workshop chair (2012), IEEE Virtual Reality (2008-2012), workshop chair (2008, 2010-2011), tutorial chair (2007), student volunteer chair (2006)
- Section chair: ISVC 2012 (visualization), IEEE Virtual Reality 2012 (User Interface), SIGGRAPH Asia 2011: (Sketch and posters: User interface and interaction)
- Reviewing assignments: *IEEE Transactions on Visualization and Computer Graphics* (2009-2012), *International Journal of Human-Computer Studies* (2008-2011), *International Journal of Virtual Reality* (2008-2009), *SIGGRAPH* 2009, *Visualization* (2004, 2009-2012), CHI (2007-2012), UIST (2004), VR (2004-2012), VRST (2004), GI (2007), ISVC (2007-2010), SIGGRAPH Web3D (2007-2008), 3DUI (2006-2009), Multimedia (2008), PacificVis (2011-2012).
  Details: 2012: IEEE Visualization (TVCG, 6); VAST (1); Web3D (4); Advances in Human-Computer Interaction (1); Visual Computing (1);
- Member: IEEE, ACM, SIGGRAPH, CHI, SID, CRA Women in Computing
- Co-founder: HCC-SciVis and SciVis mailing lists

UNIVERSITY SERVICE

- Chair: graduate student research award, USM, Computer Science, 2012-current
- Faculty search committee, USM, Computer Science, 2012
- Outreach committee, USM, Computer Science, 2011
- Recruitment committee, USM, Computer Science, 2011-current
- Curriculum committee, USM, Computer Science, 2009-2011
- Research committee, USM, Computer Science, 2009-2011
- Coordinator: Women in Computer Science, Brown University, 2007-2009
- Social chair: Upsilon Pi Epsilon, Virginia Tech, 2004-2006
- WebZar, 3D Interaction Research Group, Virginia Tech, 2004-2005
- Member, Virginia Tech Center for Human-Computer Interaction, 2002-2006
- Member, Virginia Tech 3D Interaction Research Group, 2002-2006

OTHER SERVICE

- USM **Recruitment** photo shoot (April 9, 2010)
- School of Computing Program review (July 8, 2010)
- Gave six research talks in China (Peking U, Zhejiang U, Nankai U, Tianjin U, etc.) (May 21 – June 8, 2010)
- School of Computing, demo to more than 20 high school students (October 29, 2009)
- Advisement week to 15 students for the School of Computing

SPEAKERS / RESEARCHERS INVITED TO USM

- Dr. Yongpeng Zhang, Asso. Prof. Texas A&M Prairie view, November 2011.

- Dr. Kader M. Hasan, Asso. Prof., University of Texas Medical Center, Dept. of Diagnostic & Interventional Imaging, July 2011
- Dr. Carl Schmidt, Asso. Prof., Animal & Food Sciences, University of Delaware, June 2011
- Dr. Bindu Nanduri, Asso. Prof., College of Basic Sciences, Mississippi State University, August 2010
- Dr. Robert Hester, Prof. University of Mississippi Medical Center, Department of Physiology, September 10, 2010, title: HumMod.
- Dr. Francis Quek, Prof., Computer Science, Virginia Tech, February 22, 2010, title: Embodiment Awareness, Mathematics Discourse, and the Blind.
- Dr. Chad Steed, Geospatial Sciences and Technology Branch, Naval Research Laboratory, November 2009, title: Guided Analysis of Hurricane Trends Using Statistical Processes Integrated with Interactive Parallel Coordinates.